Name:_____ P: _____

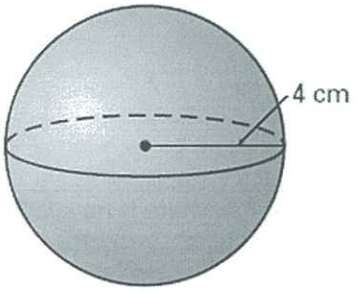
Failure to show all work will result in a LaSalle!

HW# 144: Vol. & SA of Spheres
Due: Wednesday, April 29
Geometry

SA (Sphere) = $4\pi r^2$ **Vol. (Sphere) =** $\left(\frac{4}{3}\right)\pi r^3$

1) Find the surface area and volume of the sphere.

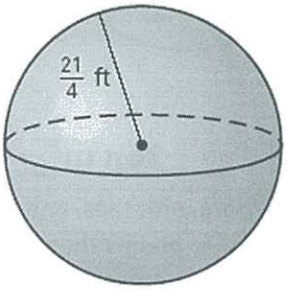
$r =$



Surface Area: _____ Volume: _____

2) Find the surface area and volume of the sphere.

$r =$



Surface Area: _____ Volume: _____

3) What is the approximate radius of a sphere with a volume of 128π cubic centimeters?

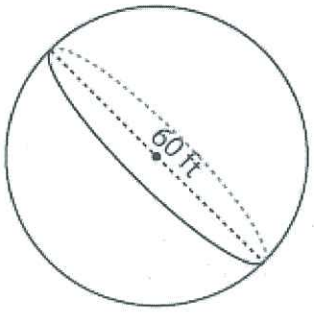
$V = \left(\frac{4}{3}\right)\pi r^3$

$128\pi =$

A. 2.5 cm
B. 4.58 cm
C. 6.62 cm
D. 8 cm

4) Find the surface area & volume of the sphere below.

$r =$



Surface Area: _____ Volume: _____

Define Your Pride

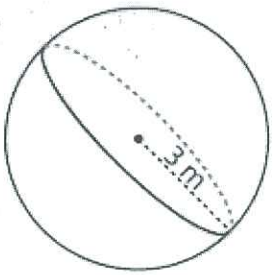
5) Anisa worked backward to show that a sphere with a volume of $36\pi\ m^3$ must have a radius of 3m. Complete the work that she did to arrive at this correct answer. The first two steps are given:

$V = 36\pi\ m^3$

$\frac{4}{3}\pi r^3 = 36\pi\ m^3$

$\cdot 3 \quad\quad \cdot 3$

$4\pi r^3 = 108\pi$



Volume = $36\pi\ m^3$

6) Find the radius of a sphere with a volume of 2304 cubic feet.

$V = \left(\frac{4}{3}\right)\pi r^3$

$= \left(\frac{4}{3}\right)\pi r^3$

7) Brandon is going to cover his bathroom with tiles, and he plans to but the tiles next to each other so there is no space in between them. The tiles are rectangular prisms that are 2 centimeters tall by 10 centimeters wide by 8 centimeters long. If Brandon's bathroom is a square that measures 4 meters by 4 meters, what is the minimum number of tiles he will need to fully cover his bathroom floor?

Step 1: Find surface area of the largest tile face only (this is essentially area).

Step 3: Check/convert units if needed

Step 2: Find area of porch.

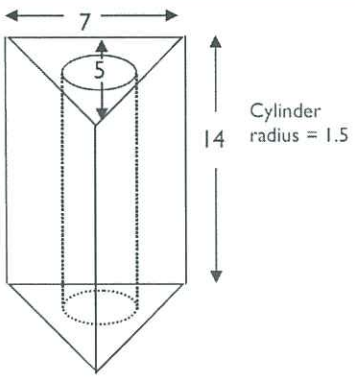
Step 4: Find # of tiles

8) Find the volume of the following shapes. Round to the nearest hundred.

Triangle Area = $\frac{1}{2}(7)(5)$

V of triangular prisim = (base area)(height)

V of cylinder =



Define Your Pride